

Listing of claims

1. (Previously presented) A method for determining whether a substance is a modulator of an ion-channel/receptor system containing a ligand controlled or mechanically controlled ion channel, comprising the steps of:

- (a) preparing a cell, which contains the ion-channel/receptor system, wherein the cell is immobilized on an extracellular potential-sensitive electrode,
- (b) bringing a substance to be tested in contact with the cell, in a medium which has a total salt concentration of ≤ 100 mmol/L,
- (c) stimulating the ion channel/receptor system,
- (d) measuring a signal at the electrode due to the ion-channel/receptor system, and
- (e) determining the effect of the substance to be tested on the measurement signal.

2-4. Canceled.

5. (Previously presented) The method according to Claim 1, characterized in that the ion channel is a potassium channel.

6. Canceled.

7. (Previously presented) The method according to Claim 1, characterized in that the ion-channel/receptor system contains an NMDA, GABA, AMPA or acetylcholine receptor.

8. Canceled.

9. (Previously presented) The method according to Claim 1, characterized in that the stimulation of the ion-channel/receptor system comprises chemical stimulation or mechanical stimulation.

10-11. Canceled.

12. (Previously presented) The method according to Claim 1, characterized in that the potential-sensitive extracellular electrode is arranged on a chip.

13. (Previously presented) The method according to Claim 1, characterized in that an array comprising a multiplicity of cells immobilized on different electrodes is prepared, and a multiplicity of substances are tested.

Claims 14-23. (Canceled)